

SECRETTSD/VOG MEMO NO. 81-69
14 May 1969

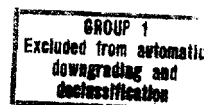
MEMORANDUM FOR: DD/ORD

ATTENTION : SUBJECT : Night Visual Surveillance Equipment
T-II-8 - 69REQUIREMENT DESIGNATION 2

1. There exists a continuing need in TSD for equipment that will allow visual surveillance of selected areas under low illumination conditions. These conditions include those of low ambient light level of the type usually labeled "starlight" and range to situations where the light level is low due to target placement, e.g. in between buildings or due to concealment of the optics. Presently available equipment consists generally of first generation image intensifiers cascaded to produce the desired intensification. The disadvantages of these devices are their weight, size, power requirements, resolution and blooming characteristics (especially when caused by stray light).

2. It is felt that this requirement should not be considered mutually exclusive of T II-2-69 and T II-7-69 which are concerned with a night photographic capability and the penetration of obscured targets. A device that improves on the defects of Starlight scope type devices is the channel plate image intensifier which is finding application in image stabilized, intensified binoculars, Cinticon TV tubes and image intensified photographic cameras. An image intensifier made by Zenith Corporation and employing a channel plate intensifier points out the direction that further work should take. This work should be directed towards a device with improved resolution (greater than 30 l/mm on axis), smaller size and weight and capable of operating under high as well as low light levels and free from blooming.

3. The problem of night surveillance was discussed with Messrs. of ORD/OS by of TSD. It was agreed that present work being done at

SECRET

SECRET

towards an image intensified photographic camera and image intensified vidicon as well as the work on a image intensified binocular system are areas that are in support of this requirement and that efforts directed towards improved resolution and smaller channel plates should be continued. While no direct ORD participation in a purely visual capability is anticipated the above cited work and the programs conducted by Night Vision Laboratories will be closely watched and any device that would be capable of incorporation into a purely visual system will be brought to the attention of TSD. The reason for no direct participation is the extensive work already being conducted in this area by Night Vision Labs. It was therefore agreed that work on related program requirements would keep in mind visual problems and that this requirement should be maintained as a parameter to be considered by ORD in its activities.

4. Any questions concerning this requirement may be directed to [REDACTED]

25X1

[REDACTED]
Program Manager For
Visual Surveillance

25X1

[REDACTED]
C/TSD/DLE

Distribution:

Orig. & 1 - Addressee

SECRET